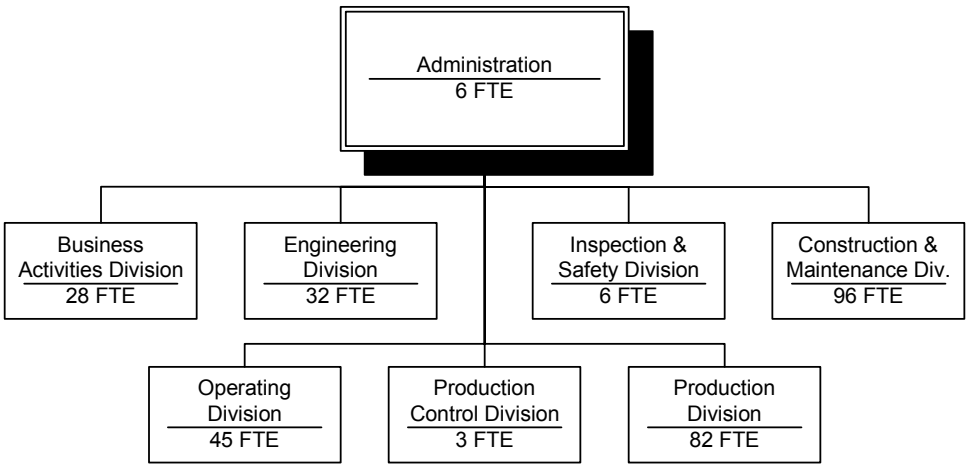
PUBLIC LIGHTING



kids cops clean

PUBLIC LIGHTING

AGENCY MISSION

To provide reliable, economical, high quality lighting, traffic signal, and energy services for residents, businesses, and tourists. By doing so we will improve the quality of life for those who live, work, and visit the City of Detroit.

CURRENT FACILITIES

The Public Lighting Department operates from three (3) main locations:

Administrative offices, warehouse and shops at 9449 Grinnell in Northeast Detroit;

Mistersky Power Station at 5425 West Jefferson in Southwest Detroit; and

Witkowski Operations Center at 1340 Third Avenue in Downtown Detroit.

PLD also owns and operates thirty-one (31) substations throughout the City and a steam plant near Herman Kiefer Hospital.

Additionally, departmental personnel are responsible for numerous transformer rooms in schools, libraries, police stations, freeway pumphouses, etc. in every part of Detroit.

Power is furnished to 1,350 services, which include the facilities of the City of Detroit, the Detroit Board of Education, Wayne State University, the United States Government, the Michigan Department of Transportation, Wayne County, and other agencies, and a small number of private customers such as privately-owned buildings on Belle Isle.

The department maintains almost 87,000 street and alley lights, several municipal parking lot installations, 1,000 traffic signal installations, and the digital PBX telephone system serving Police Headquarters, Police Precincts, and Fire Headquarters.

FIVE YEAR HISTORY

Over the most recent five fiscal years, PLD has engaged in a major and continuing street light improvement program. The initial modernization began in FY98-99 and consisted of modernizing the entire overhead residential network. Over 45,000 overhead residential lights were outfitted with new sodium vapor lights and converted to receive power from Detroit Edison's secondary service in a period of about 18 months. The department then shifted its direction to underground commercial and residential neighborhoods. New lighting was constructed around the perimeter of the General Motors United Autoworkers development; in historic Brush Park; and in a new housing development entitled East Jefferson Village.

PLD currently has under contract the modernization of approximately 5,000 lights. The streets under contract are Grand River, East Outer Drive, and West Outer Drive. Lighting is also being modernized in the Boston-Edison Historic District, Grandmont Subdivision, and the Palmer Park area.

PLD made significant improvements to its transmission capacity in FY00-01. In response to transmission failures and generation failures that caused power interruptions earlier in the fiscal year, the department installed two new 24KV transmission lines (from our power plant just east of Livernois at Morrell to the Waterman substation at West Jefferson and Waterman) and a set of capacitor banks at the Mistersky Power Plant. This new equipment enabled PLD to prevent the outages of the past and continue to assure reliable electric service delivery throughout summer peaking periods when the demand for energy continues to reach record levels.

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Over the past five years, PLD has installed a new Supervisory Control and Data Acquisition System (SCADA). This installation began in 1998 and is expected to be completed by July 1, 2005. This new equipment has computerized the control and monitoring of the substations and high voltage lines utilized by the department to deliver power to its customers. In addition, new secondary service monitors installed in such high profile customer installations such as at Wayne State University or in Detroit Public School selective sites have enabled the department to monitor power quality and reliability to these customers.

During the Y2K transition PLD diligently modified its generation and distribution equipment to ensure a smooth, seamless transition into the new millenium. Control equipment at the Mistersky Power Plant for generation units #5, #6, and #7 were inspected and modified, where necessary to prevent all types of service interruptions due to equipment that may have not been capable of handling date formats associated with the year 2000 and beyond.

Additional portable generators were purchased during Y2K preparations to ensure backup generation for critical Public Lighting customer sites such as Police Stations, Fire Engine Houses, Senior Citizen and Public Housing Sites, and Recreation Centers. The strategy and preparation paid off for the department producing an uneventful millenium transition and the backup generators have remained as a useful tool to provide backup power for critical public safety customer sites in the event of unexpected service interruptions.

Solid State Traffic Signal Controllers conversions also took place in preparation of the Y2K transition. A number of controllers were inspected and found to require a software upgrade for the Y2K date rollover. Modification to that equipment produced an error-free New Year without vehicular traffic interruptions or delays.

The replacement of obsolete electromechanical traffic signal controllers has continued over the past five years. The replacement of these controllers with solid state devices has allowed for greater timing flexibility, improved coordination of these signals with adjacent signalized intersections, and in some cases remote monitoring of the activity and performance of these intersections.

FY04-05 will also mark the beginning of a new program to install shrouds to protect the public from missing covers at the base of street lighting poles. PLD is spending $1,197,347 to cover all 23,000 poles, during the first fiscal year. After which these items will be replaced using operation and maintenance funds.

In FY03-04, PLD began a program designed to modernize the lamps associated with 330 traffic signal intersections. The upgrade consisted of retrofitting or replacing the existing lighting components in the traffic lights and pedestrian signs to Light Emitting Diode (LED) modules.

Also in FY 03-04, electrical service upgrades were performed at 120 Detroit Public Schools in conjunction with their Capital improvement program. In FY 04-05, new 13,200 volt services were installed for the newly constructed Cass Tech High School and the new Performing Arts High School.

In FY02-03, the department's staff crews completed a new 24KV distribution feeder between the Canfield and Russell substations under the capital abatement

program. This new feeder redistributed loading associated with the Wayne State University network and significantly improved the electric service delivery reliability and power quality to the campus and cultural activity center district. Recent expansion associated with the campus has required such renovations to PLD's distribution system to take place immediately.

In FY 02-03, the department's staff crews replaced a 24kv transformer in Canfield substation. Walton substation transformers #1 and #2 were replaced in FY 2002-03 and 2004-05 respectively. Stanton and Warren substation transformers were replaced in FY 2003-04.

PROPOSED FIVE YEAR CAPITAL PLAN

The Public Lighting Department has aligned its priorities to focus on the vision of and strategic priorities of this Administration. If Detroit is to become a world class city, Detroit must be a place that is clean, safe for residents, businesses, and tourists, and conducive to raising children and having families. The slogan, Kids, Cops, and Clean emphasizes the focus that must take place in order to create a world class city. It is imperative that Public Lighting provides reliable street lighting and traffic signals to accomplish this vision. PLD has therefore made the modernization of the remaining 37,000 streetlights its first priority.

Over the past five years a significant amount of debate centered on the funding and timetable associated with underground street lighting. Under the new policy instituted by the Administration, Public Lighting will replace in-kind the lighting associated with every neighborhood, where necessary at the department's cost. This policy decision has now enabled PLD to finalize a capital program to complete the modernization efforts that are badly needed to improve the reliability and performance of the street lighting network.

Of the remaining 37,000 street lights that require modernization, some 23,000 of those lights are energized and fed by underground wires and some 800 of those lights are located in historic districts. Citywide, it is estimated that the modernization of the remaining 14,000 overhead lights would be about $6 million, while the modernization costs associated with the 23,000 underground lights would be about $122 million without including the costs of abandoning and removing the current poles and foundations. Historic districts alone would require over $7 million to modernize.

In the next five years, PLD's capital plans also call for the replacement of 24kv switch-gear at three main substations – Custer, Ludden and Porter.

A new substation is planned for Belle Isle to service increased electrical loads on the island. Along with the new substation, the island's distribution system will be upgraded.

PLD will continue to replace electric meters with solid state devices that can be read remotely, allowing for our customer billing process to be fully computerized.

CAPITAL RELATIONSHIPS: INTERDEPARTMENTAL AND KEY STAKEHOLDERS

The Public Lighting Department's capital projects generally do not impact other City departments' capital programs. Just the opposite; many other City departments' capital projects impact the Public Lighting Department, such as service extensions to

various Housing Department facilities (Herman Gardens, Charles Terrace, Woodbridge Estates, etc.) and new Planning Department development projects (similar to Brush Park, East Jefferson Village, etc.)

The Traffic Signal Controller Conversion project is being performed in conjunction with the Detroit Department of Public Works (DPW).

In addition, agencies outside of the City impact the Public Lighting Department; most notably, the Michigan Department of Transportation with their freeway bridge rehabilitation project.

The Public Lighting Department is coordinating efforts with the Detroit Public Schools in their Capital Improvement Program.

GOALS FOR CAPITAL PROGRAM

Deliver reliable, economic, high quality energy (electric and steam) to our customers.

1. Provide reliable, economic, high quality street lighting on city streets.
2. Operate and maintain a reliable, high quality traffic signal system in the city.
3. Deliver reliable and economical electric energy services.

RATIONALE FOR CAPITAL PROGRAM

Lighting must be reliable and maintainable if we are to have an environment that is safe for residents, businesses, and tourists. In addition, if we are to have a city that continues to be conducive for raising families, we must continue to economically provide them services and we must provide them at an exemplary level. We must maintain traffic signals and streetlights in a manner that is responsive and affordable for the citizens of Detroit. We must have options so that we can minimize the cost of power for our citizens. We must have reliable service that will be available during all types of weather, peak demand periods, or in case of a catastrophic event.

PUBLIC LIGHTING

Mistersky Unit #7 Control System

Unit #7 is controlled and monitored by four central computer systems: a Bailey Net-90, Bailey 7000, General Electric Mark II and Fisher-Porter 3000. The Bailey Net-90 was installed in 1988, and the others in 1978. By the end of 2004 the manufacturers will no longer offer support for any of these units; all except the Bailey Net-90 are already no longer supported. Parts and repair service is very expensive and difficult to obtain, and some parts are simply not available. A new digital control system would replace all of these units and provide functionality, reliability and serviceability not available in the current equipment.

2006-07	$1,500,000	General Obligation Bonds

Mistersky Units #5, 6, 7, & GT Overhaul

The turbines on steam turbine-generators deteriorate with use, and become less reliable and less efficient over time. The manufacturers recommend overhaul of their turbines every six years. In some cases catastrophic failures can occur without diligent maintenance. Overhauls consist of replacing steam seals, worn and mechanical defective components and bringing all of the components of the turbine back into tolerance. Overhauls of Mistersky turbines on Units 5, 6, 7 and the gas turbine were last performed in 1990, 1994, 1993, and 1991, respectively. The amount of cost savings varies with the specific condition of the turbine.

2006-07	$1,800,000	General Obligation Bonds
2007-08	1,800,000	General Obligation Bonds
2008-09	3,300,000	General Obligation Bonds

Distribution System Improvements

This is a continuing program. Each year the details of the requirements are submitted, based on the needs of City departments and other agencies.

2006-07	$ 700,000	General Obligation Bonds
2007-08	1,800,000	General Obligation Bonds
2008-09	2,000,000	General Obligation Bonds
2009-10	2,000,000	General Obligation Bonds
	24,300,000	Unprogrammed

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Belle Isle Substation and Distribution

The existing substation on the island is operating at capacity. It was originally designed for when the island was strictly a park with small loads. Any increase in existing loads and/or creation of new development on the island will require a larger substation and a new distribution network.

2007-08	$ 2,000,000	General Obligation Bonds

Street Lighting Modernization

The project calls for the prioritization and evaluation of major city streets, state trunk lines, county roads, historic districts, and residential neighborhoods in an effort to expeditiously modernize lighting associated with residential safety and the safety of businesses and tourists. PLD will also be heavily involved in the modernization efforts associated with redevelopment projects throughout the city. In addition, surveying and modifications to lighting will take place around Wayne State, public schools, police precincts, fire engine houses, and recreation centers in order to provide emphasis on public safety and the safety of our children during school hours and during the hours after school when Mayor's time recreational activities will be planned.

2007-08	$ 1,000,000	General Obligation Bonds
2008-09	1,000,000	General Obligation Bonds
2009-10	1,000,000	General Obligation Bonds
	132,300,000	Unprogrammed

Electric Service Extensions

This is a continuing program. Each year the details of the requirements are submitted, based on the needs of City departments and other agencies.

2007-08	$ 500,000	General Obligation Bonds
2008-09	200,000	General Obligation Bonds
2009-10	1,000,000	General Obligation Bonds
	1,000,000	Unprogrammed

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Substation Transformer Replacement

This is a continuing program. Each year the details of the year's requirements are submitted on projected system load growth and specific expansion projects.

2007-08	$ 500,000	General Obligation Bonds
2008-09	1,000,000	General Obligation Bonds
2009-10	500,000	General Obligation Bonds
	6,500,000	Unprogrammed

Substation 24kv Breaker Replacement

This is a continuing program designed to replace and upgrade high voltage breakers needed to operate and protect transmission and distribution systems.

2007-08	$ 400,000	General Obligation Bonds
2008-09	1,000,000	General Obligation Bonds
2009-10	2,000,000	General Obligation Bonds
	17,100,000	Unprogrammed

Traffic Signal Feed Upgrades

The existing traffic signal power feeds are inadequate. New features have been added to traffic signals installations that increase their power requirements. Each year the details of the program are submitted based on the needs of DPW and MDOT signal modernization projects.

2009-10	$1,500,000	General Obligation Bonds
	2,500,000	Unprogrammed

Russell Substation Upgrade

Because of increased demand in the Wayne State University and Cultural Center areas, it is necessary to install new switchgear to accommodate a third trunkline from the Mistersky Power Plant, install a third transformer and additional breaker positions for new services.

	$3,000,000	Unprogrammed

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Development Projects

This is a continuing program. Each year the details of the year's requirements are submitted based an anticipated and specific development projects.

2009-10	$1,500,000	General Obligation Bonds
	2,500,000	Unprogrammed

New Mistersky Switch House

The project calls for the installation of a new outdoor switch house to replace the 1920's vintage switch house that currently exists at the Mistersky Power Plant facility. Transmission and sub-transmission lines terminating in the existing switch house will be rerouted to terminate in a new outdoor facility that will be state-of-the art. This project will provide faster automatic switching to eliminate distribution system voltage sags and dips.

$14,000,000	Unprogrammed

Control Room Modernization

The existing Public Lighting control room was assembled circa 1970. This facility serves to monitor power to the entire Public Lighting electric service delivery system. Critical public services of police, fire, water and education all rely on this system to stay in operation. The control room, with its map and record boards, has seen continuous 24-hour use since commissioning. No redundancy exists and loss of the control room would compromise service to critical public functions. Extensive maintenance is necessary to insure accuracy and functionality of records. A full control room modernization will address ongoing maintenance issues and provide redundancy in the event of an emergency.

$1,300,000	Unprogrammed

City of Detroit
Proposed Capital Agenda
FY 2005-06 through 2009-10

Public Lighting Department

	Project Status	*Timeline*	*Impact on Budget*	*Impact on Staffing*	*Impact on Budget*	*Funding Source*	*Auth Unissued*	*Budget 2004-05*	*2005-06*	*2006-07*	*2007-08*	*2008-09*	*2009-10*	*Un-Program*	*Rec. 5-Year Plan Total*
Substation Battery Replacement	M	O	NOI	NSI		G.O.		$300							$0
SCADA System Upgrade	M	O	RF	NSI		G.O.		$500							$0
Switch House Wall and Roof	M	U	NOI	NSI		G.O.		$300							$0
Mistersky Unit #7 Control System	M	P	NOI	NSI		G.O.	$1,500			$1,500					$1,500
Mistersky Unit #5, 6, 7 and GT Overhaul	M	O	NOI	NSI		G.O.	$6,900			$1,800	$1,800	$3,300			$6,900
Distribution System Improvements	M	O	NOI	NSI		G.O.	$3,500	$1,000		$700	$1,800	$2,000	$2,000	$24,300	$6,500
Belle Isle Substation & Distribution	M	P	NOI	NSI		G.O.	$4,000				$2,000				$2,000
Street Lighting Modernization	M	O	RF	NSI		G.O.	$3,000	$4,925			$1,000	$1,000	$1,000	$132,300	$3,000
Electric Service Extensions	M	O	NOI	NSI		G.O.	$1,700	$500			$500	$200	$1,000	$1,000	$1,700
Substation Transformer Replacement	M	O	NOI	NSI		G.O.	$1,500				$500	$1,000	$500	$6,500	$2,000
Substation 24kv Breaker Replacement	M	O	NOI	NSI		G.O.	$4,335				$400	$1,000	$2,000	$17,100	$3,400
Traffic Signal Feed Upgrades	M	O	NOI	NSI		G.O.	$1,500	$500					$1,500	$2,500	$1,500
Russell Substation Upgrade	M	P	NOI	NSI		G.O.								$3,000	$0
Development Projects	N	P	NOI	NSI		G.O.	$2,000	$1,975					$1,500	$2,500	$1,500

Project Status: M=project is maintaining current infrastructure; N=project will result in new development
Project Timeline: P=project is proposed; O=project is ongoing; U=project is one time and underway
Impact on Operating Budget: AF=additional funding is required; RF=results in reduction of funding; NOI=no operating impact
Impact on Staffing Budget: AS=additional staffing is required; RS=results in reduction of staffing; NSI=no staffing impact
Impact on Operating Budget $: annual additional funding or (reduction of funding) to operating budget

Public Lighting Department

	Project Status	*Timeline*	*Impact on Budget*	*Impact on Staffing*	*Impact on Budget*	*Funding Source*	*Auth Unissued*	*Budget 2004-05*	*2005-06*	*2006-07*	*2007-08*	*2008-09*	*2009-10*	*Un-Program*	*Rec. 5-Year Plan Total*
New Mistersky Switch House	M	P	NOI	NSI		G.O.								$14,000	$0
Control Room Modernization	M	P	NOI	NSI		G.O.								$1,300	$0

Total by Funding Source		***Auth Unissued***	***Budget 2004-05***	***2005-06***	***2006-07***	***2007-08***	***2008-09***	***2009-10***	***Un-Program***	***5-Year Total***
	G.O.	*$29,935*	*$10,000*	*$0*	*$4,000*	*$8,000*	*$8,500*	*$9,500*	*$204,500*	*$30,000*

Total by Agency: Public Lighting Department	***Budget 2004-05***	***2005-06***	***2006-07***	***2007-08***	***2008-09***	***2009-10***	***Un-Program***	***Grand Total***
	$10,000	*$0*	*$4,000*	*$8,000*	*$8,500*	*$9,500*	*$204,500*	*$244,500*

Project Status: M=project is maintaining current infrastructure; N=project will result in new development
Project Timeline: P=project is proposed; O=project is ongoing; U=project is one time and underway
Impact on Operating Budget: AF=additional funding is required; RF=results in reduction of funding; NOI=no operating impact
Impact on Staffing Budget: AS=additional staffing is required; RS=results in reduction of staffing; NSI=no staffing impact
Impact on Operating Budget $: annual additional funding or (reduction of funding) to operating budget